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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,576

10/16/2003

Hugo Michiels

MICH3003/JEK

7180

23364

7590

09/07/2006

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625 SLATERS LANE
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ALEXANDRIA, VA 22314

EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/685,576

Applicant(s)

MICHIELS, HUGO

Examiner

Suhan Ni

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-21 and 23-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

Art Unit: 2615

DETAILED ACTION

1. The Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group **Art Unit 2615**.
2. In response to the Pre-Appeal Brief Request for Review filed on 05/30/2006, a conference has been held with Mr. Reinhard Eisenzopf of office of QA of TC 2600 and Ms. Sinh Tran, Supervisory Patent Examiner of AU 2615. During the conference, the examiner has been informed that the final rejection is not proper, but the prior art is still relevant and the same ground of rejection stands only with better wordings or explanations. Therefore, PROSECUTION IS HEREBY REOPENED.
3. The finality of the office action is withdrawn and a rejection is set forth below in responsive to the amendment filed 12/27/2005.
4. Regarding issues related to the conference, please directly contact Mr. Eisenzopf (571-272-2983) or Ms. Tran (571-272-7564).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 15-21 and 23-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Azima et al. (U. S. Pat. - 6,332,029).

Regarding claim 15, Azima et al. disclose a transducer (Figs. 1 and 22) for reproducing and recording sound, comprising a membrane (2) provided a generally circular piezoelectric element (9), the membrane composed of a plurality of layers (2b) made of at least one layer by a polymer (col. 24, lines 8-24), wherein the piezoelectric element (9, 27, 118) has two radial surfaces, one of the radial surfaces being directly glued (Figs. 14 and 24) into the membrane (col. 32, lines 61-66 and col. 37, lines 18-25), and the membrane lacks centrically symmetrical configuration as claimed.

Regarding claims 16-21 and 23-26, Azima et al. further disclose the transducer, wherein at least one layer of the membrane is made of metal (col. 24, lines 8-24) as claimed.

Regarding claims 27-28, Azima et al. further disclose the transducer, wherein the membrane is glued (3) to a holder (1) as claimed

Regarding claim 29, Azima et al. further disclose the transducer, wherein at least one layer of the membrane is part of a wall (53), in particular the wall of a housing of a device.

Regarding claim 30, Azima et al. further disclose the transducer, wherein at least one groove (100) is provided in the membrane.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16-21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (U. S. Pat. - 6,332,029).

Regarding claims 16-21 and 23-26, Azima et al. may not clearly teach for the details of the material of the membrane as claimed. Since providing a suitable material, such as a synthetic material for the diaphragm of a panel speaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide a suitable material, such as synthetic foam material for the core and metallic foils for the surface layers, for the membrane of the speaker as an alternate choice, in order to provide a relatively light and durable speaker.

Response to Amendment

7. Based upon the newly amended claim 15, applicant's arguments dated 12/27/2005 and 05/30/2006 have been fully considered, but they are not deemed to be persuasive.

The cited reference (U.S. Pat. - 6,332,029) does clearly show that a transducer for reproducing and recording sound, comprising a membrane (2) provided a generally circular piezoelectric element (9), the membrane composed of a plurality of layers (2b) made of at least one layer by a polymer (col. 24, lines 8-24), wherein the piezoelectric element has two radial surfaces, one of the radial surfaces being **directly** glued (adhesive) into the membrane (Figs. 14-15 and 24), and the membrane lacks centrically symmetrical configuration as claimed.

Regarding claim 15, the applicant argued that: "... the Azima et al. patent clearly fails to disclose or suggest a transducer including a piezoelectric element having a radial surface directly glued onto a membrane" (see page 4). The examiner respectfully disagrees with the applicants, that a skilled person in the art will clearly see a **piezoelectric element (27, 118) having a radial**

surface (Figs. 14 and 24) directly glued (by adhesive) onto a membrane (2) as discloses by Azima et al. in U.S. Pat. – 6,322,029.

Furthermore, applicant asserts “It is clear from this passage that the Azima et al. patent does not envision directly gluing a radial surface of a piezoelectric disk to a membrane” on page 5. Again, the examiner respectfully disagrees with the applicants. Azima et al. do clearly teach the claimed limitation of **directly gluing a radial surface of a piezoelectric disk (9) to a membrane (2)** in Figures 14-15 and 24.

Moreover, the applicant even argues for the **not** claimed limitation: “... the disk (31) is not at **all adhered** to the membrane (2)” on page 5. Again, Azima et al. do clearly show such limitation in Figure 24 with glue (20) or an adhesive.

Conclusion

8. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

9. Any response to this final action should be mailed to:

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

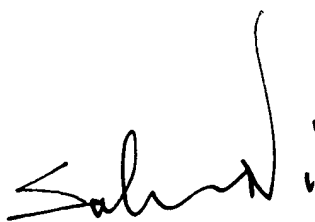
Art Unit: 2615

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (571)-272-7505, and the number for fax machine is (571)-273-7505. The examiner can normally be reached on Monday through Thursday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at (571)-272-7564.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600, or please see <http://www.uspto.gov/web/info/2600>.

September 4, 2006


SUHAN NI
PRIMARY EXAMINER